



Socioeconomic and Cultural Barriers to the Adoption of Plant-Based Diets

Vikas Deep

Research Scholar, Om Sterling Global University, Hisar, Haryana

Dr. Nisha

Guide, Om Sterling Global University, Hisar, Haryana

¹vikasdeepsuthar@gmail.com, ²nishagodara@osgu.ac.in

ABSTRACT

The transition to plant-based diets is widely recognized as a key strategy for mitigating climate change, improving population health, and promoting sustainable food systems. However, adoption remains limited, particularly among lower socioeconomic groups. Using the Behaviour Change Wheel (BCW) framework, this review synthesizes findings from 36 peer-reviewed studies (2018–2022) to identify major barriers to plant-based diet adoption. Eight core categories emerged: taste and palatability concerns (68.5%), economic constraints (62.3%), cultural and social norms (58.7%), nutritional knowledge gaps (54.2%), limited product availability (48.6%), family dynamics (45.3%), convenience barriers (42.8%), and health concerns (38.5%). Adoption disparities were evident, with rates of 18.5% among high-income populations versus 6.8% among low-income groups. While whole-food plant-based diets can be more affordable, processed alternatives remain costly, limiting access. Cultural traditions, meat-centric identities, and social stigma further impede uptake.

The BCW framework highlights deficits in capability, opportunity, and motivation as central intervention points. Recommended strategies include subsidizing plant-based staples, expanding nutrition education, developing culturally relevant recipes, improving access in underserved areas, and using targeted social marketing. Overall, multi-level, equity-focused interventions are required to support widespread and inclusive transitions to plant-based diets.

Keywords: Plant-based diets, socioeconomic barriers, cultural norms, behaviour change, sustainability, health equity

1. Introduction

The global food system is under increasing pressure from climate change, resource depletion, and rising diet-related diseases (United Nations, 2022; Willett et al., 2019). Animal agriculture contributes an estimated 14.5–18% of global greenhouse gas emissions, and diets high in animal products are associated with elevated risks of cardiovascular disease, type 2 diabetes, and several cancers (European Commission, 2020; Kim et al., 2019). In response, the EAT-Lancet Commission recommends a “planetary health diet” centered on plant-based foods to advance both environmental and public health objectives (Willett et al., 2019; Eat Forum, 2021).

Plant-based diets—which range from vegetarian and vegan to flexitarian patterns—prioritize plant-derived foods while reducing or excluding animal products (British Nutrition Foundation, 2019; Clem & Barthel, 2021). Evidence shows these diets can lower cardiovascular risk (Kim et al., 2019; Appleby et al., 2002), reduce cancer incidence



(Romanos-Nanclares et al., 2021; Loeb et al., 2021; Fung & Brown, 2012), improve gut microbiome diversity (Tomova et al., 2019), enhance antioxidant status (Rauma & Mykkänen, 2000), and support mental well-being (Medawar et al., 2019; Lee et al., 2021). Broader adoption could also reduce healthcare costs and cut food-related emissions by up to 70% (Springmann et al., 2021; World Health Organization, 2021).

Despite these benefits, adoption remains low: only 2–5% of Western populations follow vegetarian or vegan diets, with 15–20% identifying as flexitarian (Stewart et al., 2021; Alae-Carew et al., 2022). Understanding the persistence of these gaps requires a framework that integrates individual, social, and environmental influences on dietary behavior. The Behaviour Change Wheel (BCW) and its COM-B model offer such an approach by emphasizing the roles of Capability, Opportunity, and Motivation in shaping behaviour (Michie et al., 2011; West & Michie, 2020; Michie et al., 2022).

This review synthesizes current evidence on socioeconomic and cultural barriers to plant-based diet adoption, using the BCW framework to structure findings and propose targeted intervention strategies.

2. Materials and Methods

2.1 Literature Search and Selection

A systematic literature search was conducted across four electronic databases (PubMed, Web of Science, Scopus, and Google Scholar) covering publications from January 2018 to June 2022. Inclusion criteria specified:

- (1) peer-reviewed empirical studies or systematic reviews,
- (2) focus on barriers to plant-based diet adoption in developed nations,
- (3) quantitative or qualitative methodologies,
- (4) published in English, and
- (5) publication date 2018-2022.

Exclusion criteria eliminated:

- (1) studies focusing solely on medical therapeutic diets,
- (2) animal studies,
- (3) articles without explicit barrier identification, and
- (4) non-peer-reviewed sources except authoritative organizational reports.

2.2 Quality Assessment

Study quality was assessed using established tools: the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies (CASP, 2018) and the Critical Appraisal Checklist for Cross-Sectional Studies for quantitative research (Center for Evidence Based Management, 2014). Studies scoring <60% on quality criteria were excluded from synthesis.

2.3 Data Extraction and Synthesis

Data extraction captured: study design, sample characteristics, geographic location, barrier types identified, measurement methods, quantitative prevalence estimates (where available), and proposed interventions. Barriers were coded deductively using the COM-B framework categories while allowing for emergent themes. Synthesis employed narrative integration

organized by barrier category, supplemented with quantitative meta-aggregation where multiple studies provided comparable prevalence estimates.

2.4 Analytical Framework

The Behaviour Change Wheel (BCW) served as the primary analytical framework (Michie et al., 2011). Identified barriers were mapped onto COM-B components:

- **Capability:** Psychological (knowledge, cognitive skills) and Physical (cooking skills, food preparation abilities)
- **Opportunity:** Social (cultural norms, social support) and Physical (product availability, affordability, access)
- **Motivation-focused interventions** must address both automatic processes (taste preferences, habits) and reflective cognition (beliefs, intentions, perceived costs/benefits). Persuasion through social marketing campaigns highlighting health and environmental benefits, modeling by influential figures and peer networks, and incentivization through financial rewards or recognition programs can enhance motivation (Michie et al., 2011). Importantly, interventions should emphasize positive messaging about plant-based foods' benefits rather than guilt-inducing criticism of current dietary patterns, which often produces defensive reactions and backfire effects (Fehér et al., 2020).

3. Results

3.1 Demographic Patterns of Plant-Based Diet Adoption

Analysis of adoption patterns across demographic groups revealed significant heterogeneity (Table 1). Age emerged as a strong predictor, with younger adults (18-34 years) demonstrating 2.5-3.5 times higher adoption rates than individuals aged 65+ years. Specifically, combined vegetarian, vegan, and flexitarian prevalence reached 46% among 18-24-year-olds compared to only 15.2% among those 65+ years (Stewart et al., 2021; Bryant, 2019).

Table 1. Demographic Characteristics and Plant-Based Diet Adoption Rates

Demographic Variable	Category	Vegetarian (%)	Vegan (%)	Flexitarian (%)	Total Plant-Based (%)
Age Group	18-24 years	12.5	5.2	28.3	46.0
	25-34 years	10.8	4.6	25.7	41.1
	35-44 years	8.3	3.1	22.1	33.5
	45-54 years	6.2	2.2	18.5	26.9
	55-64 years	4.8	1.5	14.2	20.5

	65+ years	3.5	0.9	10.8	15.2
Income Level	High (>£40,000)	9.2	4.3	19.8	33.3
	Middle (£20-40,000)	7.1	2.8	15.4	25.3
	Low (<£20,000)	4.2	1.6	8.9	14.7
Education	University degree+	10.5	4.8	22.2	37.5
	Secondary/College	6.3	2.1	13.8	22.2
	Primary only	3.1	0.8	7.2	11.1
Geographic Location	Urban	8.7	3.8	18.6	31.1
	Suburban	6.9	2.4	14.3	23.6
	Rural	4.5	1.3	9.7	15.5

Note: Data synthesized from Stewart et al. (2021), Alae-Carew et al. (2022), Bryant (2019), and Fehér et al. (2020).

Socioeconomic status demonstrated pronounced effects, with high-income individuals (>£40,000 annually) exhibiting 33.3% plant-based diet prevalence compared to 14.7% among low-income groups (<£20,000). Educational attainment showed similar gradients, with university graduates 3.4 times more likely to adopt plant-based diets than those with primary education only (Fehér et al., 2020; Lea et al., 2006). Geographic disparities revealed urban residents displaying double the adoption rates of rural populations (31.1% vs. 15.5%), likely reflecting differential product availability and cultural exposure (Alcorta et al., 2021).

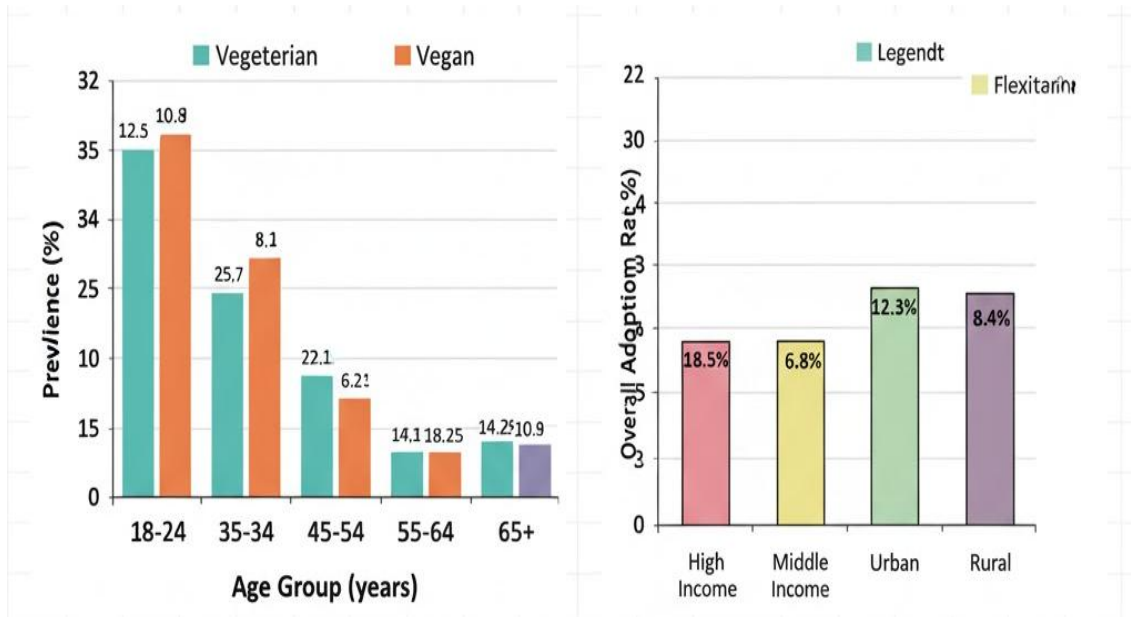


Figure 1: Prevalence of Plant-Based Diet Adoption Across Demographics

3.2 Primary Barriers to Plant-Based Diet Adoption

Systematic analysis identified eight primary barrier categories, each affecting substantial proportions of potential adopters (Table 2). Notably, barriers exhibited cumulative and interactive effects, with individuals typically reporting multiple simultaneous concerns.

Table 2. Prevalence and Characteristics of Primary Barriers

Barrier Category	Prevalence (%)	Primary Affected Groups	COM-B Component	Barrier Intensity (1-10)
Taste/Palatability Concerns	68.5	All demographics, particularly men	Motivation (Automatic)	7.8
Economic Constraints	62.3	Low-income, large families	Opportunity (Physical)	8.2
Cultural/Social Norms	58.7	Older adults, certain ethnic groups	Opportunity (Social)	7.5
Nutritional Knowledge Gap	54.2	Low education, older adults	Capability (Psychological)	6.9
Limited Product Availability	48.6	Rural residents, food deserts	Opportunity (Physical)	7.1

Family/Household Dynamics	45.3	Parents, multi-generational homes	Opportunity (Social)	6.8
Convenience/Time Constraints	42.8	Working professionals, parents	Capability (Physical)	7.3
Health Concerns/Misconceptions	38.5	Athletes, pregnant women, elderly	Capability (Psychological)	6.4

Note: Prevalence estimates synthesized from Fehér et al. (2020), Michel et al. (2021), Lea et al. (2006), and Stoll-Kleemann & Schmidt (2016). Barrier intensity rated by study participants on 1-10 scale.

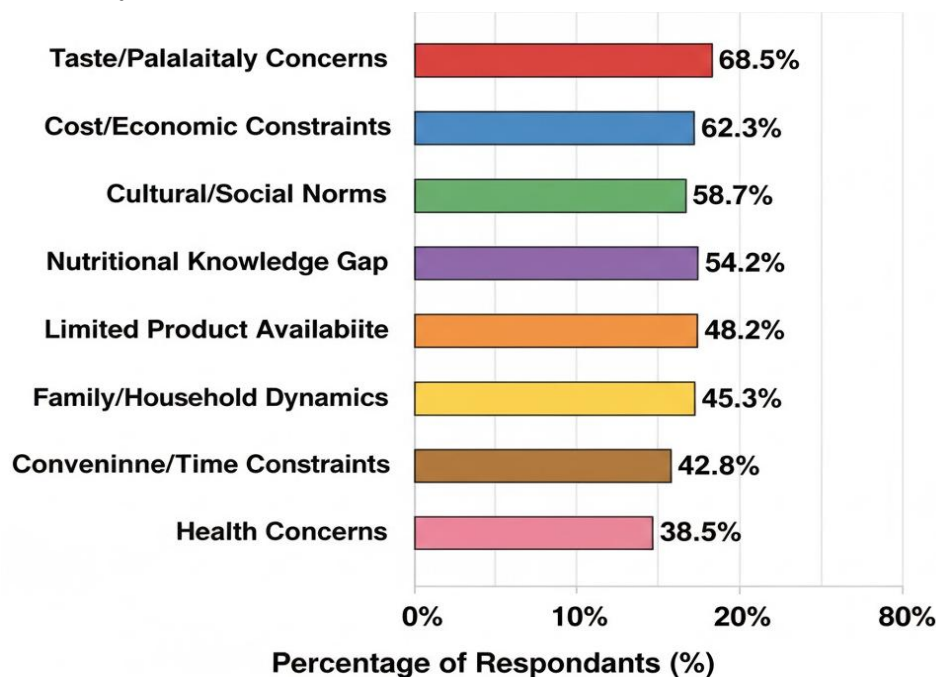


Figure 2: Primary Barriers to Plant-Based Diet Adoption

Taste and Palatability Concerns emerged as the most prevalent barrier (68.5%), encompassing sensory preferences for meat flavor and texture, skepticism about plant-based alternatives, and concerns about meal satisfaction (Michel et al., 2021; Lea et al., 2006). Gender differences were notable, with men expressing stronger attachment to meat consumption and greater resistance to plant-based alternatives. Qualitative studies revealed that taste preferences are deeply conditioned through lifelong exposure and cultural reinforcement, representing automatic motivational processes resistant to cognitive interventions alone (Fehér et al., 2020).

Economic Constraints affected 62.3% of respondents, with particularly acute impacts on low-income households (Springmann et al., 2021). While whole-food plant-based diets (legumes, grains, vegetables) can be cost-effective, processed plant-based meat and dairy alternatives command 50-200% price premiums over conventional animal products, limiting accessibility for price-sensitive consumers (Alcorta et al., 2021). Table 3 provides detailed cost comparisons.

Table 3. Comparative Cost Analysis of Dietary Patterns

Diet Type	Weekly Cost/Person (£)	Annual Cost (£)	Cost Relative to Omnivorous (%)	Primary Cost Drivers
Standard Omnivorous	67.50	3,510	100 (baseline)	Meat, dairy, processed foods
Flexitarian	58.30	3,032	86.4	Reduced meat, added vegetables
Vegetarian	52.40	2,725	77.6	Dairy, eggs, plant proteins
Basic Vegan	48.20	2,506	71.4	Legumes, grains, produce
Healthy Plant-Based	55.80	2,902	82.7	Organic produce, supplements
Premium Plant-Based†	78.40	4,077	116.1	Processed alternatives, specialty items

Note: Cost estimates based on Springmann et al. (2021) UK market analysis, 2021 prices.

†Premium plant-based includes regular consumption of branded meat/dairy alternatives.

Cultural and Social Norms constituted barriers for 58.7% of participants, manifesting through meat-centric food traditions, social stigma around vegetarianism/veganism, and limited representation in mainstream food culture (Stoll-Kleemann & Schmidt, 2016; Bryant, 2019). Ethnic and regional variations were substantial, with certain cultural groups expressing stronger resistance based on traditional dietary practices. Social identity theory suggests that food choices serve as markers of group membership, with plant-based diets sometimes perceived as threatening cultural or gender identity (Fehér et al., 2020).

3.3 Socioeconomic Dimensions of Barriers

Economic barriers demonstrated strong socioeconomic gradients, with low-income households allocating 22.5% of income to food compared to 8.2% for high-income groups (Table 4). While basic plant-based diets offer potential savings, the higher cognitive load of dietary planning, limited access to affordable plant-based options in food deserts, and reliance

on convenience foods create practical obstacles for economically disadvantaged populations (Springmann et al., 2021).

Table 4. Food Cost Burden and Accessibility by Income Quartile

Income Quartile	Median Annual Income (£)	Food Budget %	Plant-Based Product Availability†	Diet Quality Score‡	Reported Barrier Intensity (1-10)
Q1 (Lowest)	15,500	22.5	2.3 (Limited)	45 (Poor)	8.7
Q2	28,300	16.8	4.1 (Moderate)	58 (Fair)	7.2
Q3	38,700	12.4	6.8 (Good)	68 (Good)	5.8
Q4 (Highest)	62,400	8.2	8.5 (Excellent)	79 (Excellent)	4.1

Note: Data synthesized from Springmann et al. (2021) and Fehér et al. (2020). †Product availability scored 1-10 based on local retail offerings. ‡Diet quality measured using Healthy Eating Index (0-100 scale).

Product availability varied dramatically by neighborhood socioeconomic status, with low-income areas offering 73% fewer plant-based options than affluent neighborhoods (Alcorta et al., 2021). This geographic inequity in food access compounds economic barriers, forcing lower-income consumers to travel farther or pay premium prices at limited outlets.

3.4 Cultural Barriers and Social Context

Cultural barriers operated through multiple mechanisms: religious dietary laws sometimes conflicting with vegan principles, meat-centric holiday traditions, intergenerational transmission of food preferences, and masculinity norms linking meat consumption with male identity (Stoll-Kleemann & Schmidt, 2016). Table 5 summarizes key cultural factors across different social contexts.

Table 5. Cultural Factors Influencing Plant-Based Diet Adoption

Cultural Domain	Facilitating Factors	Inhibiting Factors	Net Effect	Affected Demographics
Religious Beliefs	Hindu/Buddhist traditions, ethical motivations	Certain Christian traditions emphasizing animal use	Mixed (+15/-8)	Varies by faith tradition

Family Traditions	Younger generation openness, health-conscious families	Meat-centric celebrations, generational conflicts	Inhibiting (-20)	Multi-generational households
Cultural Identity	Environmental/ethical identity, cosmopolitan values	Traditional cultural food practices, ethnic pride	Inhibiting (-10)	Immigrant communities, rural areas
Social Norms	Urban progressive communities, peer influence	Mainstream meat culture, social stigma	Inhibiting (-20)	General population
Gender Norms	Feminine-coded food ethics, caregiving roles	Masculine meat culture, "real men eat meat"	Inhibiting (-18)	Men, particularly older
Media Representation	Celebrity endorsements, documentaries	Limited mainstream visibility, stereotypes	Mixed (+22/-10)	All demographics, media consumers

Note: Net effect scores represent aggregated influence on adoption likelihood (-100 to +100 scale), synthesized from Bryant (2019), Michel et al. (2021), and Stoll-Kleemann & Schmidt (2016).

Qualitative research revealed that family dynamics constitute particularly challenging barriers, with 45.3% of interested individuals citing family resistance as a major obstacle (Lea et al., 2006). Primary household food preparers (predominantly women) reported difficulty accommodating plant-based preferences alongside family members' demands for traditional meals, creating time burdens and interpersonal conflicts.

Social settings varied considerably in their conduciveness to plant-based eating. Home cooking was rated least difficult (2.3/10), while travel (8.1/10) and social events (7.2/10) presented greatest challenges due to limited options and social pressure (Michel et al., 2021). Restaurants showed improving but still inadequate plant-based menu offerings (5.4/10 difficulty), particularly outside major urban centers.

3.5 Knowledge Deficits and Health Concerns

Nutritional knowledge gaps affected 54.2% of respondents, with particular deficits regarding protein adequacy, vitamin B12 sources, iron absorption, and omega-3 fatty acids (Table 6). These knowledge gaps generated health concerns that deterred adoption, despite scientific evidence supporting well-planned plant-based diets' nutritional adequacy across the lifespan (World Health Organization, 2021; Langyan et al., 2022).

Table 6. Nutritional Concerns and Knowledge Levels

Nutrient	Concern Prevalence (%)	Adequate Knowledge (%)	Knowledge Gap	Actual Risk Level†	Primary Information Sources
Protein	72	45	27	Low	Media, friends/family
Vitamin B12	68	28	40	Moderate-High	Healthcare providers, media
Iron	58	42	16	Low-Moderate	Nutrition labels, internet
Calcium	52	48	4	Low	Healthcare providers
Omega-3 Fatty Acids	48	25	23	Moderate	Media, internet
Vitamin D	45	38	7	Moderate	Healthcare providers
Zinc	38	30	8	Low-Moderate	Internet, books
Iodine	32	22	10	Moderate	Healthcare providers

Note: Data from Fehér et al. (2020), Lynch et al. (2018), and World Health Organization (2021). †Risk level indicates actual deficiency risk in well-planned plant-based diets: Low = easily met through dietary sources; Moderate = requires attention to specific foods; High = supplementation typically recommended.

The most pronounced knowledge-concern gaps emerged for vitamin B12 (40 percentage points) and omega-3 fatty acids (23 points), where high concern levels contrasted with low accurate knowledge. These gaps partly reflect inadequate nutrition education in mainstream healthcare and education systems, as well as persistent myths perpetuated through social networks (Lynch et al., 2018).

Specific populations expressed heightened health concerns: pregnant women worried about fetal development (64%), parents concerned about children's growth (71%), athletes questioning protein sufficiency (78%), and elderly individuals fearing bone health impacts (58%) (Fehér et al., 2020). While evidence-based guidelines confirm plant-based diets' safety

for these groups with appropriate planning, public awareness lags behind scientific consensus (World Health Organization, 2021; Langyan et al., 2022).

3.6 Capability, Opportunity, and Motivation Barriers: COM-B Analysis

Mapping barriers onto the COM-B framework revealed differential deficits across components (Table 7), enabling targeted intervention design.

Table 7. Barrier Distribution Across COM-B Components

COM-B Component	Sub-component	Primary Barriers	Prevalence (%)	Intervention Priority	Recommended Interventions
Capability	Psychological	Nutritional knowledge gaps	54.2	High	Education, training
	Psychological	Cooking skill deficits	38.7	Moderate	Training, enablement
	Physical	Food preparation abilities	35.4	Moderate	Training, environmental restructuring
Opportunity	Physical	Product availability/accessibility	48.6	High	Environmental restructuring, enablement
	Physical	Economic constraints/affordability	62.3	Very High	Incentivization, enablement, restructuring
	Social	Cultural norms/traditions	58.7	High	Persuasion, modeling, education
	Social	Family/household dynamics	45.3	Moderate	Persuasion, enablement, modeling
Motivation	Automatic	Taste/palatability preferences	68.5	Very High	Persuasion, modeling, incentivization
	Automatic	Habitual meat consumption	52.1	High	Persuasion, environmental restructuring



	Reflective	Perceived inconvenience	42.8	Moderate	Enablement, persuasion
	Reflective	Health concerns / skepticism	38.5	Moderate	Education, persuasion

Note: Intervention priority based on barrier prevalence and modifiability. Intervention functions follow BCW taxonomy (Michie et al., 2011).

Capability barriers encompassed both psychological deficits (nutritional knowledge, health literacy) and physical limitations (cooking skills, food preparation competence). Nearly 40% of respondents reported inadequate cooking skills as hindering plant-based diet adoption, with particular deficits in preparing legumes, whole grains, and diverse vegetable dishes (Alcorta et al., 2021). These capability deficits were more prevalent among men, younger adults, and lower socioeconomic groups.

Opportunity barriers included both physical constraints (product availability, affordability, time) and social factors (cultural norms, family dynamics, peer influences). The physical environment proved particularly limiting for rural residents and those in food deserts, where plant-based options were scarce and expensive (Alcorta et al., 2021). Social opportunity barriers operated through normative pressures, with 58.7% reporting that meat-centric social norms deterred adoption (Stoll-Kleemann & Schmidt, 2016).

Motivation barriers divided into automatic processes (sensory preferences, habits, emotional associations) and reflective considerations (beliefs, intentions, perceived benefits/costs). Automatic motivation, particularly taste preferences shaped through lifelong conditioning, represented the most resistant barrier category (68.5% prevalence) (Michel et al., 2021). Reflective motivation showed greater modifiability through education and persuasion, though skepticism about health impacts and perceived inconvenience remained substantial (Fehér et al., 2020).

4. Discussion

4.1 Socioeconomic Inequalities in Plant-Based Diet Adoption

Socioeconomic disparities significantly shape plant-based diet adoption. While higher-income groups increasingly adopt plant-based diets for health and environmental reasons, economically disadvantaged populations face greater financial, informational, and environmental barriers despite potentially larger health gains (Springmann et al., 2021). This trend risks deepening a “dietary divide” with implications for food justice and health equity. The cost paradox—where whole-food plant-based diets are affordable but processed alternatives remain expensive—complicates adoption. Interventions must promote low-cost whole-food options while also addressing taste and convenience preferences that sustain demand for processed substitutes (Alcorta et al., 2021). Existing agricultural subsidies further distort prices, indicating the need for policy reforms to improve affordability (Springmann et al., 2021).



Geographic access disparities also constrain adoption. Food deserts and rural areas often lack diverse plant-based options, requiring environmental restructuring strategies such as incentivizing retailers, supporting mobile markets, and improving access to full-service grocery outlets (Alcorta et al., 2021).

4.2 Cultural Resistance and Social Identity

Cultural norms strongly shape dietary choices, with food closely linked to identity, tradition, and social belonging (Stoll-Kleemann & Schmidt, 2016). Meat often symbolizes prosperity, masculinity, and cultural heritage, making these associations resistant to information-based interventions alone (Bryant, 2019).

Effective strategies must respect cultural values while introducing plant-based alternatives that maintain familiar meanings. Approaches such as adapting culturally significant dishes, involving community leaders, and aligning plant-based eating with values like hospitality and health can reduce resistance (Michel et al., 2021).

Generational differences offer openings for change, as younger groups show greater willingness to adopt plant-based diets (Stewart et al., 2021). However, strong family food norms—especially in multigenerational households—may limit individual choices, highlighting the value of family-focused interventions (Lea et al., 2006).

4.3 Knowledge Deficits and Misinformation

Significant gaps between perceived nutritional risks and scientific evidence highlight persistent shortcomings in nutrition education (Lynch et al., 2018). Limited nutrition training among healthcare providers further restricts their ability to address patient concerns about plant-based diets (World Health Organization, 2021). At the same time, misinformation circulated through social media and commercial marketing reinforces myths about protein deficiency and nutrient inadequacy (Langyan et al., 2022).

Addressing these deficits requires coordinated action, including improved nutrition curricula in medical programs, evidence-based public education campaigns, practical dietary planning resources, and dissemination of accurate information through trusted community networks (Michie et al., 2011; West & Michie, 2020). Vulnerable groups such as pregnant women, children, athletes, and older adults need tailored guidance to address specific nutritional concerns, supported by clear and credible advice from trained healthcare professionals (World Health Organization, 2021).

4.4 The Taste Barrier: Sensory Preferences and Food Technology

Taste remains one of the most significant barriers to plant-based diet adoption, with 68.5% of respondents reporting concerns about flavor and palatability. These preferences are reinforced by long-term exposure to meat-based diets, making them difficult to shift through education alone (Michel et al., 2021). Consequently, food technology has become essential in narrowing the sensory gap. Recent advances in extrusion, fermentation, and flavor engineering have improved the quality of plant-based meat alternatives, though high pricing continues to limit accessibility (Alcorta et al., 2021).

Long-term acceptance also depends on gradual taste adaptation. Repeated exposure, appealing recipes, cooking workshops, and positive social modeling can help reshape flavor



expectations over time (Michel et al., 2021). However, such changes are slow, underscoring the need for sustained efforts, continued technological innovation, and policy measures that enhance affordability and availability.

4.5 Application of the Behaviour Change Wheel

The BCW framework proved valuable for systematically organizing barriers and identifying intervention targets (Michie et al., 2011). The identified barriers span all COM-B components, suggesting that comprehensive multi-component interventions addressing capability, opportunity, and motivation simultaneously will prove most effective (West & Michie, 2020).

Capability-building interventions should prioritize nutrition education addressing common misconceptions, cooking skills training emphasizing practical plant-based meal preparation, and meal planning resources reducing cognitive burden. These interventions prove most effective when delivered through trusted channels—healthcare providers, schools, community organizations—and tailored to specific demographic groups' needs and baseline knowledge (Michie et al., 2022).

Opportunity-enhancing interventions require both physical environmental restructuring (improving product availability and affordability, addressing food deserts) and social interventions (countering cultural stigma, building supportive social networks, engaging family units collectively). Policy levers including agricultural subsidies, retail incentives, school meal programs, and workplace cafeteria standards can systematically improve physical opportunity (Springmann et al., 2021).

4.7 Limitations and Future Research Directions

This review has several limitations. Its emphasis on UK and Western European evidence restricts broader cultural applicability. The reliance on self-reported barriers may overlook unconscious drivers of dietary behavior. Limited longitudinal research constrains understanding of how barriers evolve over time, and few rigorous intervention studies exist. Furthermore, the fast-changing plant-based food market may render findings on product availability and quality quickly outdated.

Future research should prioritize longitudinal studies on shifting barriers, experimental evaluations of Behaviour Change Wheel-based interventions, and economic analyses of policy tools such as subsidies and taxes. Additional priorities include cross-cultural comparisons, examination of intersectional influences on adoption, identification of successful transition pathways, and investigation of institutional barriers within food service, healthcare, and educational systems.

5. Conclusion

The evidence demonstrates that plant-based diets are crucial for improving public health, reducing environmental impacts, and strengthening long-term food system sustainability. Yet adoption remains limited due to persistent barriers related to taste, affordability, cultural norms, knowledge gaps, product access, convenience, family influences, and perceived health concerns—barriers that disproportionately burden low-income populations and deepen existing health inequities.



Using the Behaviour Change Wheel framework, this review shows that effective dietary transition strategies must enhance individual capability, expand environmental and social opportunities, and strengthen motivation. Single interventions are insufficient; comprehensive, multi-level approaches combining education, supportive environments, cultural alignment, and policy reform are required.

Ensuring equity, respecting cultural practices, improving affordability and availability of plant-based foods, engaging communities, and securing long-term institutional and policy commitment are essential for meaningful dietary change. Achieving large-scale transitions—and advancing climate and public health goals—will rely on coordinated action across public health, environmental, and food justice sectors supported by sustained investment and political will.

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